Enhanced Recovery After Surgery (ERAS®) Process and Continuous Improvement Methodology

Mary Korte, MSN, MHA, RN, CNOR, Kristin Wheeler, BSN, RN, CCRN, Erick Cooper DO, Nazar Kalivoshko MD
Kartik Gopal, PhD, Victoria Wells, MSN, RN-BC, CAPA, Tim Norman, RN, CCRN, Shelly Sykes, BSN, CAPA

Summa Health System – Akron Campus Akron, OH

Abstract
Enhanced Recovery After Surgery (ERAS®) processes were implemented in 2015 and continue to evolve based on patient outcomes.

Initial steps included:
- A postoperative nausea and vomiting (PONV) plan of care to identify PONV risk and standardize physician orders based on patient co-morbidities
- A multi-modal pain management plan for perioperative care to reduce previous opioid requirements
- RN awareness for plan of care change management

Objective
To improve the patient’s postoperative nausea and vomiting symptoms and decrease opioid use

Methods
- A pilot was trialed which included specific surgeons and specialty cases
- Surgeons collaborated with anesthesia about the multimodal plan of care
- Anesthesia leadership developed the ERAS® orders
- Clinical process improvement included changes in current practice in the Preadmission Testing (PAT), Sameday Surgery Department (SDS), Operating Room (OR) and Post Anesthesia Care Unit (PACU)
- Preop medications: aperient, acetaminophen, and gabapentin
- IntraOp interventions: transverse abdominis plane blocks (TAP); ketamine, lidocaine bolus/drip and esmolol bolus/drip
- Chart audits were completed and reported to all stakeholders
- Celecoxib, fentanyl and dimenhydrinate were added to the patient medication regimen
- Preop NPO status changes included carbohydrate loading

Results
ERAS® Opioid Administration

Morphine Equivalent
10mg Morphine = 1mg Diliaudid = 0.1mg Fentanyl
2mg IV Morphine = 5mg Dicydalone

PreOp

IntraOp

PostOp

Antibiotic prophylaxis
And Thromboprophylaxis
Preadmission Counseling
No preoperative testing
Fluid and carbohydrate loading
Pre-medications: Celecoxib, Pepcid, Acetaminophen, Gabapentin
No extensive bowel prep
No premedication

Prevention of nausea and vomiting
Early removal of catheter
Early nutrition
Stimulation of gut motility
Non-opioid analgesia/NSAIDS
Nerve Blocks
Avoidance of salt and water overload
Audits of compliance and outcome
Early removal or no nasogastric tube

Discussion and Outcomes
- Reported PONV reduced by 6% (baseline -14%; post implementation - 8%)
- Opioid use reduction of 64% (baseline -27.6 mg; 4th qtr 2017 - 9.9 mg)
- Phase I – Avg Length of stay reduced 8%; 2016 -92 mins; 2018 -85 mins
- Phase II – Avg Length of stay reduced 14%; 2016 -74 mins; 2018 -65 mins
- Continued care improvements with additional nerve blocks, re-evaluation, and changes in pre-op medications
- Continuing quarterly audits

PeriAnesthesia Nursing Implications
- Embracing Evidence Based Practice for continuous quality care
- Nurses are expecting patients to require less opioids based on ERAS® medication protocols and blocks
- Interdisciplinary collaboration and asking questions guides our practice
- Assisting patients to recognize expected “pain and comfort goals”
- Continuing education and understanding

References

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